

AMENDMENTS TO THE CLAIMS

Please cancel claims 1-28 without prejudice or disclaimer therein and add new claims 29-36. This listing of claims will replace all prior versions, and listings, of claims in the application:

Listing of Claims:

1. – 28. (Canceled)

29. (New) A structured data receiving method of receiving a plurality of fragment data constituting a structured data having a tree structure and a plurality of fragment data configuration information, created one for each fragment data, to concatenate said plurality of fragment data at a receiving side to generate the structured data stored,

each piece of fragment data configuration information including reference information having location information on a location of corresponding fragment data and position information on a connection position of the corresponding fragment data in the structured data,

said structured data receiving method comprising the steps of:
specifying the location of the corresponding fragment data based on the reference information included in each piece of fragment data configuration information:

receiving fragment data from the specified location; and
concatenating the received fragment data to generate the structured data, based on the position information included in each piece of fragment data configuration information,

wherein said position information includes information specifying a node in the structured data and information specifying a connection position of the

corresponding fragment data in relation to the specified node, and

wherein when the connection position of the corresponding fragment data in the structured data is immediately before a lower node located one level lower than a given node, the information specifying the node included in said position information is information specifying the lower node and the information specifying the connection position of the corresponding fragment data in relation to the specified node in said position information is information specifying a position, which is at the same level as that of the specified node in relation to a node that is one level higher than that of the specified node and which is immediately before a position of the specified node, as the connection position of a highest node of the corresponding fragment data, and

when the connection position of the corresponding fragment data in the structured data is immediately after a last node of lower nodes located one level lower than a given node or is a position one level lower than a given node having no lower node, the information specifying the node included in said position information is information specifying the given node and the information specifying the connection position of the corresponding fragment data in relation to the specified node in said position information is information specifying a position, which is a position at one level lower than that of the specified node and which is the last node at the lower level, as the connection position of the highest node of the corresponding fragment data.

30. (New) A structured data receiving method of receiving a plurality of fragment data constituting a structured data having a tree structure and a plurality of fragment data configuration information, created one for each fragment data, to concatenate said plurality of fragment data at a receiving side to generate the structured data stored,

each piece of fragment data configuration information including reference information and position information on a connection position of the corresponding fragment data in the structured data, the reference information having location information on a location of corresponding fragment data and information an a name of a highest node of the corresponding fragment data,

said structured data receiving method comprising the steps of :

specifying the location of the corresponding fragment data based on the location information included in the reference information included in each piece of fragment data configuration information;

receiving fragment data from the specified location;

processing said position information included in each piece of fragment data configuration information according to the information on the name of the highest node included in the reference information included in each piece of fragment data configuration information; and

concatenating the received fragment data to generate the structured data, based on the processed position information,

wherein said position information includes information specifying a node in the structured data and information specifying a connection position of the corresponding fragment data in relation to the specified node, and

wherein when the connection position of the corresponding fragment data in the structured data is immediately before a lower node located one level lower than a given node, the information specifying the node included in said position information is information specifying the lower node and the information specifying the connection position of the corresponding fragment data in relation to the specified node in said position information is information specifying a position, which is at the same level as that of the specified node in relation to a node that is one level higher than that of the specified node and

which is immediately before a position of the specified node, as the connection position of a highest node of the corresponding fragment data, and

when the connection position of the corresponding fragment data in the structured data is immediately after a last node of lower nodes located one level lower than a given node or is a position one level lower than a given node having no lower node, the information specifying the node included in said position information is information specifying the given node and the information specifying the connection position of the corresponding fragment data in relation to the specified node in said position information is information specifying a position, which is a position at one level lower than that of the specified node and which is the last node at the lower level, as the connection position of the highest node of the corresponding fragment data.

31. (New) A structured data receiving method of receiving a plurality of fragment data constituting a structured data having a tree structure and a plurality of fragment data configuration information, created one for each fragment data, to concatenate said plurality of fragment data at a receiving side to generate the structured data stored,

each piece of fragment data configuration information including reference information and position information on a connection position of the corresponding fragment data in the structured data, the reference information having location information on a location of corresponding fragment data and information on a content of the corresponding fragment data,

said structured data receiving method comprising the steps of:
specifying the location of the corresponding fragment data based on the location information included in the reference information included in each piece of fragment data configuration information;

receiving from the specified location, fragment data determined to be concatenated based on the information on the content included in the reference information included in each piece of fragment data configuration information; and

concatenating the received fragment data to generate the structured data, based on the position information included in each piece of fragment data configuration information,

wherein said position information includes information specifying a node in the structured data and information specifying a connection position of the corresponding fragment data in relation to the specified node, and

wherein when the connection position of the corresponding fragment data in the structured data is immediately before a lower node located one level lower than a given node, the information specifying the node included in said position information is information specifying the lower node and the information specifying the connection position of the corresponding fragment data in relation to the specified node in said position information is information specifying a position, which is at the same level as that of the specified node in relation to a node that is one level higher than that of the specified node and which is immediately before a position of the specified node, as the connection position of a highest node of the corresponding fragment data, and

when the connection position of the corresponding fragment data in the structured data is immediately after a last node of lower nodes located one level lower than a given node or is a position one level lower than a given node having no lower node, the information specifying the node included in said position information is information specifying the given node

and the information specifying the connection position of the corresponding fragment data in relation to the specified node in said position

information is information specifying a position, which is a position at one level lower than that of the specified node and which is the last node at the lower level, as the connection position of the highest node of the corresponding fragment data.

32. (New) A structured data receiving method of receiving a plurality of fragment data constituting a structured data having a tree structure and a plurality of fragment data configuration information, created one for each fragment data, to concatenate said plurality of fragment data at a receiving side to generate the structured data stored,

each piece of fragment data configuration information including reference information and position information on a connection position of the corresponding fragment data in the structured data, the reference information having location information on a location of corresponding fragment data, information on a name of a highest node of the corresponding fragment data, and information on a content of the corresponding fragment data,

said structured data receiving method comprising the steps of:

specifying the location of the corresponding fragment data based on the location information included in the reference information included in each piece of fragment data configuration information;

receiving from the specified location, fragment data determined to be concatenated based on the information on the content included in the reference information included in each piece of fragment data configuration information;

processing the position information included in each piece of fragment data configuration information according to the information on the name of the highest node included in the reference information included in each piece of fragment data configuration information;

concatenating the received fragment data to generate the structured data, based on the processed position information,

wherein said position information includes information specifying a node in the structured data and information specifying a connection position of the corresponding fragment data in relation to the specified node, and

wherein when the connection position of the corresponding fragment data in the structured data is immediately before a lower node located one level lower than a given node, the information specifying the node included in said position information is information specifying the lower node and the information specifying the connection position of the corresponding fragment data in relation to the specified node in said position information is information specifying a position, which is at the same level as that of the specified node in relation to a node that is one level higher than that of the specified node and which is immediately before a position of the specified node, as the connection position of a highest node of the corresponding fragment data, and

when the connection position of the corresponding fragment data in the structured data is immediately after a last node of lower nodes located one level lower than a given node or is a position one level lower than a given node having no lower node, the information specifying the node included in said position information is information specifying the given node and the information specifying the connection position of the corresponding fragment data in relation to the specified node in said position information is information specifying a position, which is a position at one level lower than that of the specified node and which is the last node at the lower level, as the connection position of the highest node of the corresponding fragment data.

33. (New) A structured data receiving method of receiving a plurality of

first fragment data, a plurality of fragment data configuration information each corresponding to each first fragment data and which are information for generating a structured data having a tree structure by concatenating said plurality of first fragment data at a receiving side, and a fragment data update data including a second fragment data and concatenation information for concatenating the second fragment data and the structured data,

each piece of fragment data configuration information including reference information having location information on a location of corresponding first fragment data, first position information on a connection position of the corresponding first fragment data in the structured data, and first concatenation processing information for specifying an 'add' as a processing way for concatenating the corresponding first fragment data and the structured data at the receiving side,

the concatenation information included in the fragment data update data including a second position information on a connection position of the corresponding second fragment data in the structured data and second concatenation processing information for specifying an "add" as a processing way for concatenating the corresponding second fragment data and the structured data at the receiving side,

wherein said first position information included in the fragment data configuration information includes information specifying a node in the structured data and information specifying a connection position of the corresponding first fragment data in relation to the specified node, and

wherein when the connection position of the corresponding first fragment data in the structured data is immediately before a lower node located one level lower than a given node, the information specifying the node included in said first position information is information specifying the lower node and the

information specifying the connection position of the corresponding first fragment data in relation to the specified node in said first position information is information specifying a position, which is at the same level as that of the specified node in relation to a node that is one level higher than that of the specified node and which is immediately before a position of the specified node, as the connection position of a highest node of the corresponding first fragment data, and

when the connection position of the corresponding first fragment data in the structured data is immediately after a last node of lower nodes located one level lower than a given node or is a position one level lower than a given node having no lower node, the information specifying the node included in said first position information is information specifying the given node and the information specifying the connection position of the corresponding first fragment data in relation to the specified node in said first position information is information specifying a position, which is a position at one level lower than that of the specified node and which is the last node at the lower level, as the connection position of the highest node of the corresponding first fragment data,

wherein said second position information included in the fragment data update data includes information specifying a node in the structured data and information specifying a connection position of the corresponding second fragment data in relation to the specified node, and

wherein when the connection position of the second fragment data in the structured data is immediately before a lower node located one level lower than a given node, the information specifying the node included in said second position information is information specifying the lower node and the information specifying the connection position of the second fragment data in relation to the specified node in said second position information is information specifying a

position, which is at the same level as that of the specified node in relation to a node that is one level higher than that of the specified node and which is immediately before a position of the specified node, as the connection position of a. highest node of the second fragment data, and

when the connection position of the second fragment data in the structured data is immediately after a last node of lower nodes located one level lower than a given node or is a position one level lower than a given node having no lower node, the information specifying the node included in said second position information is information specifying the given node and the information specifying the connection position of the second fragment data in relation to the specified. node in said second position information is information specifying a position, which is a position at one level lower than that of the specified node and which is the last node at the lower level, as the connection position of the highest node of the second fragment data,

said structured data receiving method comprising the steps of:
receiving the fragment data configuration information and the fragment data update data;

specifying the location of the corresponding fragment data based on the reference information included in each piece of fragment data configuration information;

receiving the first fragment data from the specified location; and
adding the received first fragment data to the connection position based on the first position information and the first concatenation processing information included in each piece of fragment data configuration information and adding the second fragment data included in the received fragment data update data to the connection position based on said second position information and the second concatenation processing information included in the received

fragment data update data to generate the structured data.

34. (New) A structured data receiving method of receiving a plurality of first fragment data, a plurality of fragment data configuration information each corresponding to each first fragment data and which are information for generating a structured data having a tree structure by concatenating said plurality of first fragment data at a receiving side, and a fragment data update data including a second fragment data and concatenation information for concatenating the second fragment data and the structured data,

each piece of fragment data configuration information including reference information, first position information on a connection position of the corresponding first fragment data in the structured data and first concatenation processing information for specifying an "add" as a processing way for concatenating the corresponding first fragment data and the structured data at the receiving side, the reference information having location information on a location of corresponding first fragment data and information on a name of a highest node of the corresponding first fragment data,

the concatenation information included in the fragment data update data including a second position information on a connection position of the corresponding second fragment data in the structured data and second concatenation processing information for specifying an "add" as a processing way for concatenating the corresponding second fragment data and the structured data at the receiving side,

wherein said first position information included in the fragment data configuration information includes information specifying a node in the structured data and information specifying a connection position of the corresponding first fragment data in relation to the specified node, and

wherein when the connection position of the corresponding first fragment data in the structured data is immediately before a lower node located one level lower than a given node, the information specifying the node included in said first position information is information specifying the lower node and the information specifying the connection position of the corresponding first fragment data in relation to the specified node in said first position information is information specifying a position, which is at the same level as that of the specified node in relation to a node that is one level higher than that of the specified node and which is immediately before a position of the specified node, as the connection position of a highest node of the corresponding first fragment data, and

when the connection position of the corresponding first fragment data in the structured data is immediately after a last node of lower nodes located one level lower than a given node or is a position one level lower than a given node having no lower node, the information specifying the node included in said first position information is information specifying the given node and the information specifying the connection position of the corresponding first fragment data in relation to the specified node in said first position information is information specifying a position, which is a position at one level lower than that of the specified node and which is the last node at the lower level, as the connection position of the highest node of the corresponding first fragment data,

wherein said second position information included in the fragment data update data includes information specifying a node in the structured data and information specifying a connection position of the corresponding second fragment data in relation to the specified node, and

wherein when the connection position of the second fragment data in the structured data is immediately before a lower node located one level lower than a

given node, the information specifying the node included in said second position information is information specifying the lower node and the information specifying the connection position of the second fragment data in relation to the specified node in said second position information is information specifying a position, which is at the same level as that of the specified node in relation to a node that is one level higher than that of the specified node and which is immediately before a position of the specified node, as the connection position of a highest node of the second fragment data, and

when the connection position of the second fragment data in the structured data is immediately after a last node of lower nodes located one level lower than a given node or is a position one level lower than a given node having no lower node, the information specifying the node included in said second position information is information specifying the given node and the information specifying the connection position of the second fragment data in relation to the specified node in said second position information is information specifying a position, which is a position at one level lower than that of the specified node and which is the last node at the lower level, as the connection position of the highest node of the second fragment data, said structured data receiving method comprising the steps of:

receiving the fragment data configuration information and the fragment data update data;

specifying the location of the corresponding fragment data based on the location information included in the reference information included in each piece of fragment data configuration information:

receiving the first fragment data from the specified location;
processing said first position information included in each piece of fragment data configuration information according to the information on the

name of the highest node included in the reference information included in each piece of fragment data configuration information; and

adding the received first fragment data to the connection position based on the processed first position information and the first concatenation processing information included in each piece of fragment data. configuration information and adding the second fragment data included in the received fragment data update data to the connection position based on said second position information and the second concatenation processing information included in the received fragment data update data to generate the structured data.

35. (New) A structured data receiving method of receiving a plurality of first fragment data, a plurality of fragment data configuration information each corresponding to each first fragment data and which are information for generating a structured data having a tree structure by concatenating said plurality of first fragment data at a receiving side, and a fragment data update data including a second fragment data and concatenation information for concatenating the second fragment data and the structured data,

each piece of fragment data configuration information including reference information, first position information on a connection position of the corresponding first fragment data in the structured data, and. first concatenation processing information for specifying an “add” as a processing way for concatenating the corresponding first fragment data and the structured data at the receiving side, the reference information having location information on a location of corresponding fragment data and information on a content of the corresponding fragment data,

the concatenation information included in the fragment data update data including a second position information on a connection position of the

corresponding second fragment data in the structured data and second concatenation processing information for specifying an "add" as a processing way for concatenating the corresponding second fragment data and the structured data at the receiving side,

wherein said first position information included in the fragment data configuration information includes information specifying a node in the structured data and information specifying a connection position of the corresponding first fragment data in relation to the specified node, and

wherein when the connection position of the corresponding first fragment data in the structured data is immediately before a lower node located one level lower than a given node, the information specifying the node included in said first position information is information specifying the lower node and the information specifying the connection position of the corresponding first fragment data in relation to the specified node in said first position information is information specifying a position, which is at the same level as that of the specified node in relation to a node that is one level higher than that of the specified node and which is immediately before a position of the specified node, as the connection position of a highest node of the corresponding first fragment data, and

when the connection position of the corresponding first fragment data in the structured data is immediately after a last node of lower nodes located one level lower than a given node or is a position one level lower than a given node having no lower node, the information specifying the node included in said first position information is information specifying the given node and the information specifying the connection position of the corresponding first fragment data in relation to the specified node in said first position information is information specifying a position, which is a position at one level lower than

that of the specified node and which is the last node at the lower level, as the connection position of the highest node of the corresponding first fragment data,

wherein said second position information included in the fragment data update data includes information specifying a node in the structured data and information specifying a connection position of the corresponding second fragment data in relation to the specified node, and

wherein when the connection position of the second fragment data in the structured data is immediately before a lower node located one level lower than a given node, the information specifying the node included in said second position information is information specifying the lower node and the information specifying the connection position of the second fragment data in relation to the specified node in said second position information is information specifying a position, which is at the same level as that of the specified node in relation to a node that is one level higher than that of the specified node and which is immediately before a position of the specified node, as the connection position of a highest node of the second fragment data, and

when the connection position of the second fragment data in the structured data is immediately after a last node of lower nodes located one level lower than a given node or is a position one level lower than a given node having no lower node, the information specifying the node included in said second position information is information specifying the given node and the information specifying the connection position of the second fragment data in relation to the specified node in said second position information is information specifying a position, which is a position at one level lower than that of the specified node and which is the last node at the lower level, as the connection position of the highest node of the second fragment data,

said structured data receiving method comprising the steps of:

receiving the fragment data configuration information and the fragment data update data;

specifying the location of the corresponding first fragment data based on the reference information included in each piece of fragment data configuration information;

receiving from the specified location, the first fragment data determined to be concatenated based on the information on the content included in the reference information included in each piece of fragment data configuration information; and

adding the received first fragment data to the connection position based on the first position information and the first concatenation processing information included in each piece of fragment data configuration information and adding the second fragment data included in the received fragment data update data to the connection position based on said second position information and the second concatenation processing information included in the received fragment data update data to generate the structured data.

36. (New) A structured data receiving method of receiving a plurality of first fragment data, a plurality of fragment data configuration information each corresponding to each first fragment data and which are information for generating a structured data having a tree structure by concatenating said plurality of first fragment data at a receiving side, and a fragment data update data including a second fragment data and concatenation information for concatenating the second fragment data and the structured data,

each piece of fragment data. configuration information including reference information, first position information on a connection position of the corresponding first fragment data in the structured data, and first concatenation

processing information for specifying an "add" as a processing way for concatenating the corresponding first fragment data and the structured data at the receiving side, the reference information having location information on a location of corresponding first fragment data, information on a name of a highest node of the corresponding first fragment data, and information on a content of the corresponding fragment data,

the concatenation information included in the fragment data update data including a second position information on a connection position of the corresponding second fragment data in the structured data and second concatenation processing information for specifying an "add" as a processing way for concatenating the corresponding second fragment data and the structured data at the receiving side,

wherein said first position information included in the fragment data configuration information includes information specifying a node in the structured data and information specifying a connection position of the corresponding first fragment data in relation to the specified node, and

wherein when the connection position of the corresponding first fragment data in the structured data is immediately before a lower node located one level lower than a given node, the information specifying the node included in said first position information is information specifying the lower node and the information specifying the connection position of the corresponding first fragment data in relation to the specified node in said first position information is information specifying a position, which is at the same level as that of the specified node in relation to a node that is one level higher than that of the specified node and which is immediately before a position of the specified node, as the connection position of a highest node of the corresponding first fragment data, and

when the connection position of the corresponding first fragment data in the structured data is immediately after a last node of lower nodes located one level lower than a given node or is a position one level lower than a given node having no lower node, the information specifying the node included in said first position information is information specifying the given node and the information specifying the connection position of the corresponding first fragment data in relation to the specified node in said first position information is information specifying a position, which is a position at one level lower than that of the specified node and, which is the last node at the lower level, as the connection position of the highest node of the corresponding first fragment data,

wherein said second position information included in the fragment data update data includes information specifying a node in the structured data and information specifying a connection position of the corresponding second fragment data in relation to the specified node, and

wherein when the connection position of the second fragment data in the structured data is immediately before a lower node located one level lower than a given node, the information specifying the node included in said second position information is information specifying the lower node and the information specifying the connection position of the second fragment data in relation to the specified node in said second position information is information specifying a position, which is at the same level as that of the specified node in relation to a node that is one level higher than that of the specified node and which is immediately before a position of the specified node, as the connection position of a highest node of the second fragment data, and

when the connection position of the second fragment data in the structured data is immediately after a last node of lower nodes located one level lower than a given node or is a position one level lower than a given node having

no lower node, the information specifying the node included in said second position information is information specifying the given node and the information specifying the connection position of the second fragment data in relation to the specified node in said second position information is information specifying a position, which is a position at one level lower than that of the specified node and which is the last node at the lower level, as the connection position of the highest node of the second fragment data,

 said structured data receiving method comprising the steps of:
 receiving the fragment data configuration information and the fragment data update data;

 specifying the location of the corresponding fragment data based on the location information included in the reference information included in each *piece* of fragment data configuration information;

 receiving from the specified location, the first fragment data determined to be concatenated based on the information on the content included in the reference information included in each piece of fragment data configuration information;

 processing said first position information included in each piece of fragment data configuration information according to the information on the name of the highest node included in the reference information included in each piece of fragment data configuration information; and

 adding the received first fragment data to the connection position based on the processed first position information and the first concatenation processing information included in each piece of fragment data configuration information and adding the second fragment data included in the received fragment data update data to the connection position based on said second position information and the second concatenation processing information included in the received

fragment data update data to generate the structured data.